

if it is made available.<sup>1</sup> However, increased choices will not be the only consumer effect of BOC entry. Lower long distance prices and increased long distance competition will be the main benefit. In a market of about \$67 billion per year, price decreases will create consumer benefits in the billions of dollar per year. Market evidence which I discuss below demonstrates that long distance prices have decreased in landline long distance in Connecticut where SNET has been permitted to provide competition to the IXC's and in California and other states where GTE has been permitted to provide competition to the IXC's.

8. BOC entry into long distance will increase the economic incentives and the ability of IXC's to begin to offer local services. BOC entry will remove restrictions on AT&T, MCI, Sprint and other IXC's from bundling resold local services with their long distance services. The removal of bundling restrictions will increase the expected economic return to IXC's from offering local services. Thus, competition will increase in local markets and in long distance markets since consumers have indicated their preferences for one-stop shopping. Increased competition by BOC's in long distance markets will benefit consumers through lower long distance prices and through one-stop bundled packages of local and long distance services offered by the BOC's and by the IXC's. Increased competition will occur in local markets because once the BOC's begin to offer bundled packages of local and long distance services, IXC's will have to respond competitively with similar bundled packages of local and long distance services. The goals of increased competition of the Telecom Act of

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1. For instance, in the UK greater than 50% of cable customers also buy their local and long distance telephone service from their cable operator. I examine data from Canada subsequently.

1996 will be furthered since competition will increase in both long distance and local markets.

9. The ability of the BOCs to engage in joint marketing of local, long distance, and mobile packages will also increase competition in local markets (where IXC's and other competitors will be required by competition to respond with competitive offerings) and in long distance and mobile markets (where again competitive offerings will expand and prices will decrease). The current policy which restricts bundled offerings and joint marketing is a restriction on competition by regulation which is harming consumers.

10. The Commission's recent ruling on Ameritech's Michigan application (FCC 97-298, August 19, 1997) fails to recognize the substantial consumer benefits from the availability of one-stop shopping, joint marketing, and lower residential long distance prices. Instead, the Ameritech order states that the public inquiry "should focus on the status of market-opening measures in the relevant local exchange market". (para. 385) The Order states that BOC entry into long distance market is "an incentive or reward for opening the local exchange market." (para. 388) The Commission is once again failing to recognize that regulation is meant to benefit consumers, not to further other objectives of regulators which can lead to decreases in consumer welfare on an overall basis. The Commission's view of BOC long distance entry as a "reward" does not analyze the effect on consumers of restrictions on the BOCs while they seek to achieve "reward status" according to the Commission's dictates. My academic research has demonstrated that the Commission's previous regulatory actions on voice messaging cost consumers over \$1 billion per year

and the Commission's regulatory actions on cellular cost consumers about \$25 billion per year.<sup>2</sup> Here, the Commission's policy likewise is costing consumers billions of dollars per year, as I demonstrate subsequently, plus the benefits of one-stop shopping which consumers have indicated meets their preference for buying telecommunications services. Furthermore, as I explained above, local telephone customers suffer as well from diminished competition in those markets.

11. The Commission's "no barriers to entry" standard of regulatory perfection directly harms consumers by costing them billions of dollars per year. The policy is also not based on sound economic reasoning. Economic analysis for policy making considers the benefits and costs of a given policy design and attempts to equate the marginal benefits and marginal costs. As I demonstrate below the marginal costs of the Commission policy of not permitting increased competition in long distance markets is high--in the billions of dollars per year. The marginal benefits of the regulatory perfection standard of no barriers to local entry are considerably less than the Ameritech decision implies. If all significant barriers barriers to local entry have been removed, the Commission should permit BOC entry into long distance markets.<sup>3</sup> However, even if say 95% of the barriers to entry had been eliminated and 5% remained, it would not be in the consumers' best interest to forgo the billions of dollars of consumers benefits from long

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2. See J. Hausman, "Valuation and the Effect of Regulation on New Services in Telecommunications", forthcoming in Brookings Papers on Economic Activity, Microeconomics 1997.

3. By significant barriers to entry, I mean barriers to entry that would allow a BOC to charge supra-competitive prices.

distance competition to achieve the last 5% of entry barrier removal. Thus, the Ameritech decision does not do the correct tradeoff analysis that economic analysis demonstrates leads to the greatest consumer benefits.'

A. Economic Theory Demonstrates that BOCs Have an Economic Incentive to Decrease Long Distance Prices

12. Economic theory demonstrates quite clearly that BOCs have an economic incentive to decrease long distance prices. First, BOCs will have economies of scope which (to the extent they can be realized consistent with FCC rules) will lead to lower costs and lower prices. More importantly, because (under current regulatory policies) access and long distance are both sold at prices well above marginal (incremental) cost to cover the large fixed costs of the local and long distance networks, the "double marginalization" effect will give the BOCs an economic incentive to lower prices. The double marginalization effect occurs when two companies are in a vertical supplier/customer relationship. The upstream company sets its margin to maximize its profits individually while the downstream company does the same. If the upstream company begins to offer the downstream product also, it generally will set the final price of the downstream product to maximize its profits jointly. The company offering the combined product will often find it profitable to lower the price of the final product because it can increase its

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4. This situation is similar to the previous Commission decision in 1981 which did not permit BOC entry into voice messaging and which led to approximately a ten year delay before the service was offered. I estimate that this FCC decision cost consumers about \$1.2 billion per year. See J. Hausman, Valuation and the Effect of Regulation on New Services in Telecommunications, forthcoming in Brookings Papers on Economic Activity, Microeconomics 1997. No rational economic analysis could have led to the conclusion that the possible cost of BOC entry in terms of consumer harm could have been anywhere near this amount.

profits by lowering the price of the final product below the combined price of the previous economic situation. This price decreasing effect of vertical integration has been recognized by economists for decades.<sup>5</sup> While access reform under the 1996 Act has decreased the access margin, it has not eliminated the entire margin. Thus, the price decreasing effect of BOC entry into long distance will remain.<sup>6</sup>

13. Suppose the BOC incremental margin on access is \$0.03 per minute while the IXC incremental margin on residential long distance service is at least \$0.07 per minute. The BOC would find it to be profit maximizing to lower the total margin from \$0.10 per minute because it earns both margins, rather than only a single margin (\$0.03 for access + \$0.07 for long distance = \$0.10 total margin).<sup>7</sup> When the BOC decreases the price slightly, it sells more access and more long distance and earns approximately \$0.10 per minute, while if an IXC decreases the price it only receives the additional margin from

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5. See e.g. J. Tirole, The Theory of Industrial Organization, Cambridge, 1988, p. 174 ff. Tirole discusses the "famous illustration of double marginalization" of J. Spengler, "Vertical Integration and Antitrust Policy", Journal of Political Economy, 58, 1950. While the original example of double marginalization was in the case of monopoly, it is well known to work in the case of imperfect competition as well. Imperfect competition occurs in telecommunications markets because of large fixed and common costs. While a large literature exists that can sometimes lead to adverse results to consumers with vertical integration, these results are not applicable in the current situation because the BOCs' access price is regulated and they cannot cause the IXCs to exit the long distance market given equal access regulation and the presence of substantial sunk costs.

6. Although BOC entry together with the resulting price decreases may harm some inefficient IXCs, the public interest inquiry concerns protection of competition, not inefficient competitors. Also, note that under Sections 251 and 252 of the 1996 Act, IXCs have the ability to provide facilities-based access, which allows them to realize both margins similar to the BOCs.

7. Note that the BOC would also be using two sets of facilities, local access and long distance facilities, to earn this higher margin.

increased long distance of \$0.07 per minute. Thus, the BOC has a greater incentive to charge lower long distance prices than an IXC. Furthermore, when the BOC lowers the long distance price, the IXCs will lower their prices, which will increase the number of long distance minutes demanded and the number of access minutes for the BOCs.<sup>8</sup>

14. Using a long distance elasticity estimate of -0.723 and an economic model of AT&T price leadership in residential long distance, I compute that BOC entry will lead to decreased long distance price of at least 15-25%.<sup>9</sup> The long distance price elasticity predicts the percentage increase in long distance calls for a 1% decrease in long distance prices, and the calculation finds that the BOCs have a significant economic incentive to lower prices because of the significant increase in long distance traffic that a lower price would cause. Thus, economic analysis predicts that BOC entry creates an incentive for BOCs to decrease long distance prices and increase long distance competition. Consumers would benefit from this outcome.<sup>10</sup>

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8. This economic reasoning holds true under a wide range of specific assumptions about the exact size of the relevant margins.

9. If I let the long distance margin be higher than my previous assumption of \$0.07 per minute, which is likely to be the actual situation, I would estimate a larger expected decrease in long distance prices. The market price elasticity that I use is widely accepted in the economics literature. See J. Gatto et. al., "Interstate Switched Access Demand", Information Economics and Policy, 3, 1988, and W. Taylor and L. Taylor, "Post-Divestiture Long-Distance Competition in the United States", American Economic Review, 83, 1993.

10. This conclusion would again hold under a wide range of assumptions. For instance, if instead of a price leadership model by AT&T, I used an oligopoly model of IXC behavior such as a Cournot model, I would again find a substantial predicted decrease in long distance prices from BOC entry because the firm price elasticities increase with BOC entry. Higher firm price elasticities lead to more competitive prices. Actual market outcomes, which I discuss below, further demonstrate that prices decrease significantly

B. Long Distance Entry by SNET has Led to Decreased Long Distance Prices

15. BOC entry into long distance will almost surely lead to price decreases for consumers, especially residential customers. Decreased prices should be an important consideration for a public interest determination regarding BOC entry since consumers always benefit from decreased prices for a product or service (holding quality constant). To the extent that BOCs are permitted to enter the market, prices will decrease because the BOCs will start with a 0% share and be forced to attract customers away from AT&T, MCI, Sprint, and other IXC's. Customers will be made better off by the decreased prices and increased competition.<sup>11</sup>

16. An example of consumer benefits and increased competition from LEC entry into long distance is Southern New England Telephone Company (SNET). SNET was part of the old AT&T system, but because it was minority owned by AT&T, SNET was not covered by the MFJ. SNET provides local telephone service to all of Connecticut (except for Greenwich). Thus, SNET is in a similar position to a BOC, for instance BellSouth in any of its nine in-region states. SNET has been allowed to provide interLATA long distance service, and has offered attractive price plans. By doing so, SNET is reported to have gained about a 35%-40% share of long distance business in Connecticut, and its long

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when a LEC is permitted to provide long distance service.

11. AT&T has claimed numerous times that the reason that it has continued to increase Basket 1 prices is that the FCC set these prices too low. Indeed, AT&T's economists, Prof. Willig and Prof. Bernheim stated that the fact that Basket 1 prices were too low was their "central observation" in an affidavit filed with the Department of Justice regarding BOC entry into long distance. (Affidavit of Prof. R. Willig and D. Bernheim, 1995, p. 138). However, BOC entry will lead to lower prices.

distance customer base and interstate long distance revenues are growing in excess of 40% per year.<sup>12</sup> To compare SNET's prices to AT&T's, I gathered data during early January 1997 on SNET's long distance prices.<sup>13</sup> Using a typical pattern for residential customers, I estimated that SNET's prices were 24.0% lower than AT&T for a customer who did not qualify for an AT&T discount plan and 10.6% less for customers who qualified for an AT&T discount. Using the estimated number of AT&T customers on a discount plan, I find that overall SNET residential prices were about 18.4% less than AT&T's prices on average.

17. To do some direct comparisons, SNET's peak period (no discount) interstate price was \$0.23 per minute while AT&T's was \$0.31 per minute, a difference of 34.8%. Since SNET does not bill in full minute increments the actual difference will be even larger. For an average user who qualifies for a discount, SNET's price decreased to \$.20 per minute while AT&T's decreased to \$.233 per minute, for a difference of 15.5%. Similar differences existed for shoulder and offpeak periods. SNET charged a uniform rate for both shoulder (5-11 PM) and offpeak of \$.13 per minute, while AT&T charged \$.19 per minute for shoulder and \$.16 per minute for offpeak, both significantly above SNET's rates. Thus, while the per minute average differed depending on the exact calling pattern for a particular residential user, SNET's rates were significantly below AT&T's rates in Connecticut.<sup>14</sup>

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12. Southern New England Telecommunications Corporation Press Release, July 24, 1997.

13. SNET had both lower prices than AT&T and a longer offpeak period, both of which lead to savings for consumers.

14. I only use interstate rates in the comparison since those rates are analogous to the interLATA rates affected by the prohibition on the BOCs to provide interLATA long distance. To the extent that AT&T has decreased its



18. This comparison of AT&T and SNET did not account for the recent price changes enacted on July 1, 1997 by AT&T due to their promise to the FCC to lower residential long distance prices when access rates were decreased. However, I checked AT&T's new prices in Connecticut and I found a similar relationship of SNET undercutting AT&T prices. In particular, AT&T decreased its peak period rate to \$0.29 per minute and also decreased its evening and night rates. However, AT&T does not include these lower rates in its discount plans, so that customers who qualify for discounts still pay the previous rates. I now estimate that overall SNET rates are about 17.3% less than AT&T's interLATA rates in Connecticut.

19. During 1997 AT&T has offered one-rate plans, with the primary advertised package a single rate of \$0.15 per minute at all times of day. However, SNET has undercut AT&T prices here as well. SNET offers a discount of 10%-15% off the \$0.15 per minute price depending on monthly calling volume. SNET also bills in per second increments while AT&T bills in per minute increments.<sup>15</sup> Taking these two source of price differences into account and assuming an average long distance call of 4.0 minutes with a uniform distribution across seconds, I estimate that SNET's one-rate prices are

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intrastate rates to consumers, which may be compared to intraLATA rates in the BOCs' territories, an additional consumer benefit would arise from increased competition. AT&T has decreased its intrastate rates in Connecticut because AT&T cannot lower interstate rates only in Connecticut, but would be required to do a nationwide price decrease which would not be in AT&T's profit maximizing interest since it does not face long distance competition from BOCs (or other LECs) in most other states.

15. AT&T also offers a lower one-rate price after payment of a monthly fee. However, AT&T's most economical plan bills in one minute increments so that it generally continues to be more expensive than SNET's one-rate plan, although the percentage difference decreases for greater monthly usage.

approximately 17.5% lower than AT&T's one-rate prices.<sup>16</sup> This estimate is quite close to the 17.3% estimate above on the standard long distance rates.

C. Gains in Consumer Welfare from Decreased Long Distance Prices

20. On a national basis, if competition had the same effect as in Connecticut, the benefits to residential long distance customers can be calculated using a well known economic approach.<sup>17</sup>

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16. Use of a log normal distribution for call duration yields a minimum estimate of 17.5%. As the variance of the distribution increases the percentage discount also increases.

17. This formula is well known in the public finance literature in economics. See e.g. A. Auerbach, "The Theory of Excess Burden and Optimal Taxation", in A. Auerbach and M. Feldstein, Handbook of Public Economics, Amsterdam, 1985. The second term in the formula is calculated with (utility) compensated quantities using the formula from J. Hausman, "Exact Consumer's Surplus and Deadweight Loss", American Economic Review, 71, 1981.

Change in Consumer Welfare from Lower Long Distance Prices

$$\begin{aligned}\Delta W &= \sum_{i=1}^n -\Delta p_i (q_i + .5\Delta q_i) \\ &= \sum_{i=1}^n -\frac{\Delta p_i}{p_i} [p_i q_i + .5\eta_i \left( \frac{\Delta p_i}{p_i} \right) (p_i q_i)]\end{aligned}$$

where:  $q_i$  = quantity (1)

$p_i$  = price

$\eta_i$  = price elasticity

$\Delta p_i / p_i$  = percentage change in price

The first term in the formula is the percentage price change times the size of the residential long distance market which I estimate to be approximately \$33.7 billion. I first use the SNET prices from January, 1997 to estimate the consumer savings which are approximately \$6.2 billion per year.<sup>18</sup> Thus, the direct savings to residential long distance customers would total about \$6.2 billion per year. The second term in the equation arises from increased consumer welfare from making more long distance calls because of the lower prices. Here, I need an estimate of the uncompensated price elasticity so that I use -0.723 given above. This term leads to another \$406 million in increased consumer welfare that would arise from additional calls that customers would place because of the lower rates.<sup>19</sup> The total increase in consumer welfare using 1996 values is \$6.6 billion, under the assumption that

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18. This term arises from multiplying \$33.7 billion by 0.184.

19. I use a compensated demand elasticity of -.712 which leads to \$406 million using the second term of equation (1).

AT&T and other major IXC's will be forced to respond to BOC entry with lower prices.<sup>20</sup> Additional gains would also go to businesses because of the increased competition which would likely lead to lower long distance prices for small businesses.

21. When I update the calculations using AT&T's August 1997 rates, which imply a price change of 0.173, and expected 1997 long distance revenues of \$37.1 billion, I estimate that the direct savings to residential long distance customers with BOC entry into long distance would total about \$6.42 billion per year. The second term, for consumer surplus, leads to another \$395 million in increased consumer welfare that would arise from additional calls that customers would place because of the lower rates. The total increase in consumer welfare for residential customers alone from BOC long distance entry using 1997 values is \$6.82 billion. Thus, using updated 1997 data, I estimate that overall residential consumers would gain about \$7 billion in consumer welfare. Again, additional gains would also go to businesses because of the increased competition causing lower long distance prices for small businesses.

22. The public interest benefit of BOC entry into long distance markets is demonstrated by SNET's role in bringing lower long distance prices to

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20. AT&T has approximately 50% of the residential long distance market. When the BOCs begin to offer lower long distance prices, AT&T will be forced by competition to respond with lower prices. I then expect the pricing plans of other large IXC's to decrease by similar percentage amounts to maintain their competitive position. Prices could well decrease by more than SNET's discounts, however, since the wholesale price of interLATA traffic of 1.0-1.5 cents per minute demonstrates that long distance margins could decrease considerably with increased competition.

Connecticut consumers.<sup>21</sup> AT&T has responded by lowering its intrastate prices as well, which demonstrates increased competition. AT&T has not claimed that SNET has distorted competition through cross subsidy, misallocation of costs, or through discrimination. SNET has simply offered lower prices. Increased competition from new entry leads to lower prices. Consumers benefit from lower prices and increased competition.

23. Another example of a large LEC which provides interstate long distance service is GTE.<sup>22</sup> GTE began providing long distance telephone service in areas in which GTE provides local exchange service in March 1996. GTE charges lower rates than AT&T for both interstate and intrastate calls. GTE's discount plan, Easy Savings, has the same discount rates and terms as AT&T's largest discount plan, True Reach Savings, so that the comparison of prices is straightforward between GTE and AT&T and their discount plans.<sup>23</sup> GTE's prices are 17.2% lower than AT&T's prices for residential customers.<sup>24</sup> Thus, both GTE and SNET are offering customers substantial discounts in the range of 17-18%. The estimate of consumer savings and increased consumer

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21. Similarly, cellular long distance prices have decreased in some markets since BOC entry into providing cellular long distance after passage of the Telecommunications Act of 1996. For instance, Bell Atlantic-NYNEX chose a strategy of undercutting by 10% or more the lowest available long distance prices in a give MSA. This strategy caused Bell Atlantic-Nynex long distance cellular rates to be about 15-25% below AT&T's long distance cellular rates.

22. GTE is approximately equal to an average size BOC in terms of either total access lines or total revenue.

23. GTE gives an additional 10% discount for the first year of service. I do not take account of this additional discount in the calculation because of not knowing the churn rate for GTE customers.

24. AT&T began an advertising campaign which claimed that GTE's service and network is unreliable. GTE sued AT&T for false and misleading advertising.

welfare from BOC entry would again be in the \$7 billion range if based on GTE's prices, similar to the calculations based on SNET's prices.

D. Gains in Consumer Welfare from the Ameritech Decision Standard

24. The previous analysis demonstrates that Commission policy is costing consumers approximately \$7 billion per year, or about \$580 million per month for each month of Commission induced delay in seeking its goal of no barriers to entry. The mistake in this policy can be demonstrated by using equation (1) to estimate how much consumer gain might be caused by a realization of the Commission's regulatory perfection standard of no barriers to entry. This estimate demonstrates that Commission policy is harming consumers and contravenes the public interest standard.

25. The second term in equation (1) for local exchange markets is essentially zero because previous research has found that the own price elasticity of local exchange service is near zero.<sup>25</sup> Thus, only the first term  $-(\Delta p_1/p_1)(p_1q_1)$  occurs in the consumer welfare calculation where  $p_1$  and  $q_1$  are the prices and quantities of local exchange demand. This term is likely to be small overall to the extent that regulation has been effective.<sup>26</sup>

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25. Hausman et. al. estimated the elasticity with respect to the basic exchange price to be -0.005. See J. Hausman, T. Tardiff, and A. Belinfante, "The Effects of the Breakup of AT&T on Telephone Penetration in the United States," American Economic Review, 83, 1993. Other econometric research has estimated a similarly low elasticity.

26. An objection might be made here that long distance access prices could decrease with competitive entry. Of course, the Commission could achieve this goal by increasing the SLC and decreasing long distance access prices which would increase consumer welfare as I have demonstrated previously. See J. Hausman, "Proliferation of Networks in Telecommunications: Technological and Economic Considerations," D. Alexander and W. Sichel eds.,

Furthermore, most economists agree that local exchange service is priced below incremental cost which further limits welfare gains. Most importantly, if the BOCs have satisfied the provisions of Sections 271 and 272 of the Telecommunications Act of 1996, then significant barriers to local entry have been removed.<sup>27</sup> For the Commission to set a standard so that all barriers to entry have been eliminated is against the public interest because the incremental gain from the first term is likely to be very small for the last incremental step to regulatory perfection. Analysis of the public interest standard of consumer welfare demonstrates that consumer welfare would be increased if BOC entry were permitted because the consumer welfare gains from increased competition in long distance will more than outweigh the incremental gain from the last step to regulatory perfection that the Commission's Ameritech decision demands.

### III. Further Economic Factors

#### A. Experience in Other Countries

26. The U.S. is the only country where the incumbent LEC is not permitted to compete in long distance. Every other country which has permitted competition has permitted the incumbent LEC to compete. For

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Networks, Infrastructure, and the New Task for Regulation, Univ. of Michigan Press, 1995. In the context of the first term of equation (1) this policy change of an increased SLC and decreased long distance access prices would be a pure transfer among consumers with no aggregate consumer welfare effects to the extent that regulation has been effective. The effects on the deadweight loss from long distance calling from the second term of equation (1) would be very much smaller than the \$7 billion per year I have estimated for BOC entry into long distance markets.

27. By significant barriers to entry, I mean barriers to entry that would allow a BOC to charge supra-competitive prices.

example, Canada, the UK, Australia, New Zealand, Japan, and Hong Kong all allow the incumbent LEC to compete in long distance. Long distance competition began in Mexico in January 1997, and the incumbent LEC was also allowed to compete there, too. Thus, every other country has decided that the benefits of LEC competition in long distance outweigh possible competitive concerns. Many of these countries, e.g. the UK, Australia, and Mexico, have somewhat similar price cap regulatory frameworks to the U.S. I find it instructive that all these other countries which face the same (or even greater) anti-competitive hypothetical possibilities have rejected the U.S. framework of not allowing LECs to compete in long distance.<sup>28</sup>

27. In 1992 when Canada decided to allow long distance competition, it decided not to follow the U.S. prohibition on LEC provision of long distance. Instead, it decided to allow BC Tel, TELUS, Bell Canada and the other regional LECs to provide long distance in competition with AT&T Canada (previously associated with other companies) and Sprint. Indeed, Canada now has lower residential long distance prices than does the U.S. For example, the local company in British Columbia (BC Tel) offers a price of C\$0.17 per minute during all times periods, or US\$0.122 per minute in U.S. currency. TELUS, the local telephone company in Alberta, charges US\$0.115 in US currency per minute during peak periods and US\$0.10 during off peak periods. Sprint in Canada has recently offered an even lower price plan of \$0.108 per minute in U.S.

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28. Since all of these countries have introduced competition subsequent to the AT&T divestiture decree, each country has considered and rejected the U.S. choice of not permitting LEC competition in long distance. Other countries, moreover, may well have greater anti-competitive possibilities because of problems with their form of regulation, e.g. Australia.



currency.<sup>29</sup> Thus, BC Tel is 18.6% less expensive than AT&T's one rate plan offered to residential consumers in the U.S., and Telus is 28% less expensive. This outcome is quite remarkable given that Canada is much less densely populated than the U.S. and has historically had significantly higher long distance prices. Moreover, the markets for telecommunications equipment, e.g. fiber optic cable, electronics, and switches, are international in scope so that Canadian long distance companies and U.S. long distance companies purchase their equipment from the same vendors, e.g. Northern Telecom and Lucent.<sup>30</sup> Significantly greater competition has occurred in Canada because of LEC participation, similar to the outcome in Connecticut and in GTE territories. Consumers benefit from the lower prices in Canada.

#### B Lock Step Pricing Among the Major U.S. Long Distance Providers

28. Current residential long distance prices are above the competitive level. In Exhibit 2, I demonstrate the lock step pricing behavior of AT&T, MCI, and Sprint over the period 1990-1996. Each time AT&T announced a price increase, MCI and Sprint followed. The remarkable economic fact about most of these price increases is that they were not the result of changes in AT&T's economic costs. Instead, regulatory accounting changes explain most of the price increases. The price increases were the result of changes in the FCC

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29. Note that Sprint offers a \$0.10 per minute rate in the US during off-peak periods, but charges regular peak prices during peak periods. Thus, the Canadian plan is significantly cheaper.

30. Canada also has a long distance access payment system similar to the U.S. with similar access prices, so that the lower long distance prices are the result of increased competition. For instance, the BC Tel access rate at each end is \$0.028 per minute in US currency and Telus is \$0.034 per minute in US currency. Both amounts exceed the U.S. long distance access rate of approximately \$0.025 per minute.

price cap regulation of AT&T, which allowed for price increases when the "Z factor" changed because of non-economic accounting regulation changes."

29. An even more troubling outcome of AT&T's price increases is that MCI and Sprint followed along. Certainly, MCI's and Sprint's economic costs did not change significantly when the regulatory accounting revisions were made to AT&T's regulation by the FCC. MCI and Sprint could have kept their prices at the old level and gained share from AT&T. Instead, they decided it would be more profitable to increase their prices along with AT&T.

30. The lock step price increases in long distance are even more troubling because the largest cost component, long distance access, has decreased significantly over the same time period. In Exhibit 2, the national average for access charges as computed by the FCC is given. During the period January 1990-July 1996, average access charges fell by 27%. Since AT&T and MCI have stated on numerous occasions that access charges are 45-50% of their costs, the decrease in access charges leads to a decrease of approximately 13% in total costs. Furthermore, other cost components of long distance have decreased, especially the electronics which are used in the fiber optic networks. Over the last 3 years, the price of bulk long distance for large

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31. For instance, in 1993, AT&T's price cap index was increased by over \$200 million, primarily because of the adoption of accrual accounting for certain post-retirement benefits (SFAS 106). Effective August 1, 1993, AT&T raised its rates for residential services by about one percent and its commercial rates by about 3.9 percent. Another price increase episode soon followed, in January 1994, when AT&T raised its prices yet again by about \$700 million. Two further lock step pricing episodes occurred in 1996 when AT&T raised its prices and MCI and Sprint soon followed the price increase.

volumes has decreased from 4.5 cpm to about 1.3 cpm. As one would expect the bulk long distance price to be affected primarily by the marginal costs of transport, this decrease in prices indicates that the marginal cost of transport almost certainly has decreased. Thus, two major cost components of long distance service -- access and transport -- have both decreased significantly over the past few years, yet residential long distance prices have not reflected these price decreases. This outcome is another indication of non-competitive behavior.

31. Economists for AT&T and MCI have responded to the lock step pricing data by stating that many customers receive discounts. About 50% of AT&T customers do not receive discounts. Furthermore, since many of the discounts are computed as a percentage off of the list price, increases in the list price also affect discount prices. Thus, the tariff rates have an important effect on long distance prices.

32. AT&T, MCI, and Sprint again raised their prices during late November 1996. AT&T announced the increase in its prices by 5.9% on November 27, 1996. As usual, MCI increased its prices by approximately the same percentage to go into effect at the same time as the AT&T price increases. Sprint also raised its prices at approximately the same time. Note that a substantial number of AT&T customers pay these higher prices, which increased by 10.2% in 1996 alone.<sup>32</sup> During 1997 AT&T has offered one-rate plans, but

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32. AT&T stated that part of the price increase was necessary to fund its efforts to enter the local and wireless markets. (WSJ, Nov. 29, 1996) This statement demonstrates AT&T's belief in its market power since investments in local and wireless markets do not affect the incremental cost of providing long distance service.

these plans do not offer significant savings to a large segment of residential long distance customers who make the majority of their calls during off-peak periods. Furthermore, AT&T did not pass on the recent (July 1997) access rate decreases to its one-rate plan customers or indeed, to any of their residential discount rate plan customers. AT&T only decreased prices for non-discount customers, e.g. those residential customers who pay \$0.29 per minute for peak period long distance calls. This action again demonstrates non-competitive behavior.

#### IV. Regulation Eliminates Hypothetical Competitive Distortions as a Significant Concern

33. Opponents to BOC entry into long distance typically bring up hypothetical concerns that BOC entry will distort competition. Market experience does not support their hypothetical concerns. BOCs have been allowed to compete in cellular telephone for over twelve years, CPE for over twelve years, and information services for over five years. Yet no market evidence exists to demonstrate that prices are higher or competition less because of BOC entry. Non-BOC cellular companies have been highly successful, e.g., McCaw and now AT&T. Similarly, despite opponents' dire warnings, the BOCs have at most 20% of the CPE market and probably less than 1% of information services revenue.<sup>33</sup>

##### A. Possible Cross Subsidy and Cost Misallocation

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33. See e.g. J. Hausman, "Competition in Long Distance and Equipment Markets", Journal of Managerial and Decision Economics, 1995.

34. Almost all economists agree that "pure" price caps remove cost misallocation problems. Since the regulatory cost basis does not affect prices under price cap regulation, cost allocations do not matter. Under previous FCC price cap regulation, the only major deviation from pure price caps is the possibility of sharing. Sharing is always uncertain, so cost misallocations have at most a small effect. However, now that the FCC has eliminated the sharing option, the previous objections that sharing can lead to possible competitive problems no longer exist.<sup>14</sup>

35. No human undertaking, regulation included, is perfect. Yet in previous proceedings, some opposing economists have set up perfection as their standard, and they criticize price-cap regulation recently adopted by the FCC and many states because the regulation is not "pure." Yet most economists recognize that the price cap plans do substantially decrease any incentives for a BOC to cross subsidize or misallocate costs. As the Commission previously concluded: "Incentive regulation, by in large measure removing the incentive to misallocate costs between services, may mitigate misallocation as a regulatory concern." (In the Matter of Policy and Rules Concerning Rates for Dominant Carriers, 5 FCC Rcd 6786, 6791 (1990)) Indeed, in recent reviews of price cap regulation, regulators have not used a rate of return approach to

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34. A possible objection can be made that the bi-annual review of the productivity adjustment in the price cap formula can still create a potential problem. However, to the extent that the Commission uses an industry productivity adjustment, the effect of any individual BOC's actions are too small to have a significant effect on the productivity adjustment and its prices. Indeed, I have estimated that \$1 of successful cost misallocation would lead to a change in a BOC's revenues of \$0.0094, less than 1¢. Given the penalties for violating the regulations, this extremely small possible benefit demonstrates that attempts at cost misallocation would not be worthwhile.

modify the price cap formulas. Instead, they have maintained the price cap approach of not basing regulated rates explicitly on costs. Without a cost basis for rate regulation, cross subsidy is not a problem because costs cannot be misallocated with any effect on regulated rates.

36. Indeed, the DOJ long ago realized that even under the previous rate of return regulation that local exchange service was unlikely to be used to cross-subsidize competitive services: "Experience to date indicates that such services are a very unlikely source of subsidy for competitive activities. Regulators are unwilling to let basic residential service charge or residential access charges--now generally subsidized by other services--rise to, much less above, their cost."<sup>35</sup> Now that the ability to cross-subsidize has been eliminated through the use of "pure" price caps, the specter of cross subsidy should finally be put to rest.

37. Furthermore, the FCC has a well developed regulatory framework to stop cost misallocations. Given that the Telecommunications Act of 1996 requires separation of the BOC's long distance operations from its local exchange operations for 3 years, the possibility of cost misallocations is reduced even further.

38. It would be economically irrational for the BOCs to attempt cross subsidy to distort competition in long distance. BOCs begin with a 0% share

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35. Response of the United States to Comments on its Report and Recommendations Concerning the Line-of-Business Restrictions Imposed on the Bell operating Companies by the Modification of Final Judgment", April 27, 1987, p. 50.

of interLATA long distance traffic. BOCs would only benefit from cross subsidy of long distance if lower prices today (which helps consumers) could be made up with higher prices in the future. However, such a predatory strategy is economically irrational. The "big 3" IXCs plus WorldCom all have networks which are mostly sunk costs, creating a large barrier to exit. Furthermore, no barriers to re-entry exist since the networks would still be there. Thus, BOCs could not hope to drive out the IXC competition and later raise prices.<sup>36</sup> Of course, even if they did try the Commission could always stop the attempt to raise prices by re-imposition of price caps in the interexchange market.

39. The cross subsidy hypothetical problem is sometimes cast as a possible "leveraging" problem. Leveraging is not a competitive problem if prices decrease in the related market which economic analysis and market experience demonstrates is the expected outcome in the long distance. Price decreases lead to increased consumer welfare and are pro-competitive.

#### B Possible Discrimination

40. The FCC has over 10 years of experience of non-discrimination provision for BOCs providing access. Over 97% of BOC access lines are equal access so that no competitive problem will likely arise given the successful

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36. Note that the correct definition of predation here would be price below marginal cost plus BOC contribution from access. This total equals at most \$0.072 per minute which is less than 50% of the current price of long distance to residential customers. Thus, BOCs could decrease long distance prices greatly while still pricing above incremental cost plus contribution from access.

equal access experience, as the DOJ economist in this proceeding has agreed.<sup>37</sup> The key insight here is that for possible discrimination to distort competition, the discrimination must be visible to the customer, but not visible to the competitor. Given the wide range of regulations and the agreements and network tests between BOCs and IXC, this outcome seems almost impossible. As I discussed above, competition in cellular and information services, both of which depend crucially on BOC network access, has worked well. A similar situation would exist in long distance.

41. Market experience for other LECs providing long distance service also demonstrates the lack of competitive problems. SNET, the LEC for Connecticut, has been a successful competitor in long distance in Connecticut with no claims of discrimination filed by its IXC competitors. Similarly, when I analyzed the Sprint-Centel merger, Sprint's interLATA market share was no higher in states in which it provided local service so that no evidence of discrimination was found. Since the merger of Sprint and Centel, no claims of discrimination have arisen in Nevada where Sprint is the LEC for most of the population. Thus, fears of possible discrimination have not been seen in market experience. Hypothetical concerns should not be allowed to stop increased market competition in long distance. Indeed, Professor Marius Schwartz in his affidavit for the DOJ (op. cit., para. 74) concluded that no competitive problems are likely to exist from BOC entry into long distance, and that consumers would benefit from the increased competition. (paras. 138-139)

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37. M. Schwartz, "Competitive implications of Bell Operating Company Entry Into Long-distance Telecommunications Services", May 14, 1997, paras. 137-140.



V. Conclusion

42. The estimated benefits to consumers from BOC entry into long distance total about \$7 billion per year. Considered another way, once the BOCs have satisfied the provisions of Sections 271 and 272 of the Telecommunications Act of 1996, further delay of BOC entry into long distance is equivalent to a tax on residential long distance customers of approximately \$7 billion year or over \$60 per household per year. This tax is significant for many households, since my previous academic research has demonstrated that poor households make a significant amount of long distance calls (e.g. American Economic Review, 1993). Increased consumer welfare or increased economic efficiency is the appropriate public interest standard from an economic perspective. Since BOC entry into long distance has such a potentially large effect on consumer welfare, I recommend that approval be granted as soon as Sections 271 and 272 have been satisfied.